

STATE OF TENNESSEE DEPARTMENT OF HEALTH ENVIRONMENTAL LABORATORIES

TDH: Lab Services JRL Lab Services - Jackson Regional Lab Jackson, TN 38301 731-426-0686

TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201

TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

Sent To:

Greg Denton

TDEC-WPC

6th Floor, L & C Tower Annex

401 Church Street

Nashville, TN 37243-1534

Michael Atchley TDEC-WPC

Knoxville FO

3711 Middlebrook Pike Knoxville, TN 37921

K00002313 Lab ID: **Knoxville Regional Laboratory**

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code:

327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

K00002313001

Project Name:

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY012.1RO

Date/Time Collected:

04/23/2009 10:02

Sampler's Name: County:

Geoff Klein **ROANE - 73**

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

:Hq

7.85

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature: 44

13.62

Dissolved Oxygen: 10.32

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	11	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	12	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended	ME.					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313002

Project Name:

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

2

Station No.:

EMORY002.1RO

Date/Time Collected:

04/23/2009 11:02

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO:

Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: **Agency Invoiced:**

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

:Ha

7.45

pH Units

uMHO

mg/L

Chlorine, residual:

Conductivity:

48

Temperature: 14.03 **Dissolved Oxygen: 10.25**

Other:

Flow:

CFS

TEST: Alkalinity, Total	METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	14	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	15	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	ME	ΓHOD: SM 254				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	28	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313003

Project Name:

Sample Description: Sampler Project Name: TVA Ash Spill

Approx 100' downstream from middle dredge pc Chlorine, residual:

Field Determinations

Dissolved Oxygen: 10.64

Conductivity:

Temperature:

7.24

45

13.53

pH Units

uMHO

mg/L

CFS

:Hq

Other:

Flow:

Project Site No.:

Station No.:

2A

Dredge Plume

Date/Time Collected: Sampler's Name:

04/23/2009 11:10

Geoff Klein

County: Sample Matrix: **ROANE - 73**

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Alkalinity, Total METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D				•	
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	13	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended METHOD: SM 2540D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313004

Project Name:

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY001.9RO Date/Time Collected: 04/23/2009 11:28

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:** Send Report To:

TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

TEST: Alkalinity, Total	METHOD: EPA 310.2						
ANALYTE	RESULT UNIT		MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009	

Field Determinations

Dissolved Oxygen: 10.70

Chlorine, residual:

Conductivity:

Temperature:

7.22

13.48

45

pH Units

uMHO

mg/L

CFS

:Hq

Other:

Flow:

TEST: Hardness, Calcium	ME					
ANALYTE	RESULT	UNITS	MDL	MQL.	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	ME	ΓHOD: SM 254	0F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009	

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY001.7RO

Date/Time Collected:

04/23/2009 11:39

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

7.24

pH Units

Chlorine, residual:

Conductivity:

44

uMHO

Temperature:

13.13

Dissolved Oxygen: 10.58

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	13	mg/L	3.8	10	M Chen	4/28/2009	

TEST: Hardness, Calcium	ME.					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable METHOD: SM 2540F							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Settleable Residue	U	mi/L	0.10	0.10	S Burchfield	4/24/2009	

TEST: Residue, Suspended	METHOD: SM 2540D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Suspended Solids	11	mg/L	10	10	A Peeples	4/24/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY000.1RO

Date/Time Collected:

04/23/2009 11:48

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC

Send Report To:

327.34-20 TDEC-WPC TDEC-WPC

Agency Invoiced: **Priority Date:**

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

7.26

pH Units

Chlorine, residual:

Conductivity:

58

uMHO

Temperature:

14.01

Dissolved Oxygen: 10.42

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	METHOD: EPA 310.2						
ANALYTE	RESULT	ANALYZED BY:	DATE				
Total Alkalinity	14	mg/L	3.8	10	M Chen	4/28/2009	

TEST: Hardness, Calcium METHOD: SM 3500-Ca D						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	15	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	ME	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	UNITS MDL		ANALYZED BY:	DATE	
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009	

TEST: Residue, Suspended						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

5

Station No.: CLINC002.3RO

Date/Time Collected:

04/23/2009 12:02

Sampler's Name:

04/23/2009 12:0 Geoff Klein

County:

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Alkalinity, Total METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	71	mg/L	3.8	10	M Chen	4/28/2009

Field Determinations

Dissolved Oxygen: 10.38

Chlorine, residual:

Conductivity:

Temperature:

7.85

163

14.73

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

TEST: Hardness, Calcium	ST: Hardness, Calcium METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	59	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	mi/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313008

Project Name:

Sample Description:

Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill

Project Site No.:

5A

Station No.: TN0005452 Outfall 002

Date/Time Collected: Sampler's Name:

04/23/2009 12:09

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

:Hq

7.61

pH Units

Chlorine, residual:

Conductivity:

54

uMHO

Temperature: Dissolved Oxygen: 10.37

15.50

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME	· · · · · · · · · · · · · · · · · · ·				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium	WE.	METHOD: SM 3500-Ca D				,
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	16	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	ME:					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	19	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313009

Project Name:

pH:

Field Determinations

Dissolved Oxygen: 10.61

Conductivity:

Temperature:

Other:

Flow:

8.08

222

14.94

pH Units

uMHO

mg/L

CFS

Sample Description: Sampler Project Name: TVA Ash Spill

Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual:

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected: Sampler's Name:

04/23/2009 12:21

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Alkalinity, Total	WE.					
ANALYTE	RESULT	UNITS	MDL	MQL ANALYZED BY	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	4/28/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	85	mg/L	0.7	1	M Chen	4/27/2009

TEST: Residue, Settleable	METHOD: SM 2540F					
ANALYTE	RESULT UNITS MDL		MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	4/24/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peeples	4/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit



STATE OF TENNESSEE DEPARTMENT OF HEALTH **ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL Lab Services - Jackson Regional Lab Jackson, TN 38301 731-426-0686

TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201

TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

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Nashville, TN 37243-1534

Michael Atchley

TDEC-WPC Knoxville FO

3711 Middlebrook Pike

Knoxville, TN 37921

Lab ID: K00002313

Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code:

327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

K00002313001

Project Name:

Sample Description:

Project Site No.:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Station No.:

EMORY012.1RO

Date/Time Collected:

04/23/2009 10:02

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

7.85

pH Units

Chlorine, residual:

Conductivity:

44

uMHQ

Temperature: Dissolved Oxygen: 10.32

13.62

mg/L

Other:

Flow:

TEST: Digestion Metals	MET					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP	MET	METHOD: EPA 200.7				
ANALYTE	RESULT	RESULT UNITS MDL	MDL	MQL	ANALYZED BY:	DATE
Iron	150	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	ME ⁻					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	μg/L	6.4	10	08242	4/29/2009
Antimony	U	μg/L	0.33	1	08242	4/28/2009
Arsenic	· U	μg/L	0.93	5	08242	4/28/2009
Barium	22	μg/L	2.5	5	08242	4/28/2009
Beryllium	U	μg/L	0.11	1	08242	4/28/2009
Cadmium	U	μg/L	0.41	1	08242	4/28/2009
Chromium	U	μg/L	2.0	5	08242	4/28/2009
Cobalt	0.31J	μg/L	0.04	1	08242	4/28/2009
Copper	U	μg/L	0.38	1	08242	4/28/2009
Lead	0.19J	μg/L	0.10	1	08242	4/28/2009
Manganese	29	μg/L	0.42	1	08242	4/28/2009
Nickel	1.0	μg/L	0.25	1	08242	4/28/2009
Selenium	U	μg/L	1.3	5	08242	4/28/2009
Silver	0.05J	μg/L	0.03	0.25	08242	4/28/2009
Thallium	0.65J	μg/L	0.03	1	08242	4/28/2009
Vanadium	U	μg/L	3.4	5	08242	4/28/2009
Zinc	3.4J	μg/L	1.9	5	08242	4/28/2009

K00002313001

Project Name:

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.: EMORY012.1RO

Date/Time Collected: Sampler's Name:

04/23/2009 10:02 Geoff Klein

County:

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency: Billing Code:

Knoxville TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

7.85 pH:

Dissolved Oxygen: 10.32

Chlorine, residual:

44

pH Units uMHO

Conductivity: Temperature:

13.62

mg/L

Other:

Flow:

CFS

TEST: Mercury METHOD: EPA 245.1						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.051J	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313002

Project Name:

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY002.1RQ

Date/Time Collected: Sampler's Name:

04/23/2009 11:02 Geoff Klein

County:

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced:

327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

7.45 pH:

Chlorine, residual:

Conductivity: 48

14.03

uMHO

pH Units

Temperature:

Dissolved Oxygen: 10.25

mg/L

Other:

Flow:

TEST: Digestion Metals METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP METHOD: EPA 200.7							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	800	μg/L	2.9	10	A Bass	4/29/2009	

TEST: ICP-MS	MET	THOD: EPA 200	0.8			ė.
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	1200	μg/L	12.8	20	M Pattanayek	4/29/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	3.4J	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	47	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	0.22J	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.98J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.6	μg/L	0.38	. 1	M Pattanayek	4/28/2009
Lead	1.9	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	2.3	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.33J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	3.9J	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	4.7J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313002

Project Name:

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY002.1RO

Date/Time Collected:

04/23/2009 11:02

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: **Agency Invoiced:** 327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

:Ha

7.45

pH Units

Chlorine, residual:

Conductivity:

48

uMHO

Temperature:

14.03

Dissolved Oxygen: 10.25

mg/L

Other:

Flow:

CFS

TEST: Mercury METHOD: EPA 245.1						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313003

Project Name:

Field Determinations

Dissolved Oxygen: 10.64

Conductivity:

Temperature:

pH:

Other:

Flow:

7.24

45

13.53

pH Units

uMHO

mg/L

CFS

Sample Description: Sampler Project Name: TVA Ash Spill

Approx 100' downstream from middle dredge pc Chlorine, residual:

Project Site No.:

Station No.:

Dredge Plume

Date/Time Collected: Sampler's Name:

04/23/2009 11:10 Geoff Klein

County:

Sample Matrix:

ROANE - 73 Water

EFO: **Sampling Agency:** Knoxville TDEC-WPC

Billing Code: Send Report To:

Agency Invoiced:

327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Digestion Metals	n Metals METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT UNITS MDL MQL ANALYZED BY					
Iron	330	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	MET	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	370	μg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	1.0J	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	28	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.38J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.4	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.55J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.3	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.16J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	4.2J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313003

Project Name:

Approx 100' downstream from middle dredge pc Chlorine, residual:

Field Determinations

Dissolved Oxygen: 10.64

Conductivity:

Temperature:

7.24

45

13.53

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

Sample Description: Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

Date/Time Collected:

Dredge Plume 04/23/2009 11:10

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: **Agency Invoiced:**

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Mercury	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.050J	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313004

Project Name:

Emory River mile 1.9 at underwater weir Sample Description:

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.: Date/Time Collected:

EMORY001.9RO 04/23/2009 11:28

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determination	ns	
pH:	7.22	pH Units
Chlorine, residual:		

Conductivity: 45 Temperature:

13.48 mg/L

uMHO

Dissolved Oxygen: 10.70 Other:

CFS Flow:

TEST: Digestion Metals	MET	THOD: EPA 20	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP	MET	THOD: EPA 20	0.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	230	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	ME	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	187	μg/L	6.4	10	M Pattanayek	4/28/2009
Antimony	· U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	24	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.28J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	0.59J	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.23J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	37	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.0	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	Ü	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.11J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	2.9J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313004

Project Name:

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

2B

Station No.:

EMORY001.9RO

Date/Time Collected:

04/23/2009 11:28

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency: Knoxville

Billing Code:

TDEC-WPC 327.34-20 **TDEC-WPC**

Send Report To: Agency Invoiced: **Priority Date:**

TDEC-WPC

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

7.22 pH Units pH: Chlorine, residual: 45 Conductivity: uMHO Temperature: 13.48

Dissolved Oxygen: 10.70

Field Determinations

Other:

Flow: CFS

mg/L

TEST: Mercury						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit **MQL - Method Quantitation Limit**

K00002313005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.: Date/Time Collected: EMORY001.7RO

Sampler's Name:

04/23/2009 11:39 Geoff Klein

County:

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency: Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

:Hq

7.24

pH Units

uMHO

Chlorine, residual:

Conductivity:

44

13.13

Temperature: **Dissolved Oxygen: 10.58**

mg/L

Other:

Flow:

TEST: Digestion Metals	MET	HOD: EPA 20	0.2	-		
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	340	µg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	ME	ΓHOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	400	μg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	29	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	, U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	Ŭ	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.39J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.56J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	34	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.2	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.11J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.1J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.: Station No.:

EMORY001.7RO

Date/Time Collected:

04/23/2009 11:39

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency: Knoxville

Billing Code:

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

7.24

pH Units

uMHO

Chlorine, residual:

Conductivity:

44

Temperature: **Dissolved Oxygen: 10.58**

13.13

mg/L

Other:

Flow:

ÇFS

TEST: Mercury	ME	ΓHOD: EPA 24				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.041J	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.: Station No.:

EMORY000.1RO

Date/Time Collected:

04/23/2009 11:48

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC 327.34-20

Billing Code: Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

Chlorine, residual:

Conductivity:

58

7.26

uMHO

pH Units

Temperature:

14.01

Dissolved Oxygen: 10.42 mg/L

Other:

Flow:

TEST: Digestion Metals	MET	HOD: EPA 20	0.2			
ANALYTE	RESULT UNITS MDL MQL ANALYZED BY:					
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP	ME	THOD: EPA 20	0.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	330	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	ME.	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	μg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	Ú	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	29	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.33J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.42J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	35	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.3	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.10J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.1J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY000.1RO 11:48

Date/Time Collected: Sampler's Name:

04/23/2009 Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville TDEC-WPC

Billing Code: Send Report To:

Agency Invoiced:

327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

pH:

7.26

pH Units

Chlorine, residual:

Conductivity:

58

uMHO

Temperature:

14.01 Dissolved Oxygen: 10.42

mg/L

Other:

Flow:

CFS

TEST: Mercury METHOD: EPA 245.1							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	μg/L	0.029	0.2	A Wilson	4/29/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002313007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected: Sampler's Name:

04/23/2009 12:02 Geoff Klein

County:

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced: Priority Date:

TDEC-WPC

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH:

7.85

pH Units

Chlorine, residual:

Conductivity:

163 14.73 uMHO

Temperature: **Dissolved Oxygen: 10.38**

mg/L

Other:

Flow:

TEST: Digestion Metals	METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	04/27/2009				A Wilson	4/27/2009	

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	390	μg/L	2.9	10	A Bass	4/29/2009	

TEST: ICP-MS	ME ⁻	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	340	μg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	Ü	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	Ū	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	33	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.36J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	1.0	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.49J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.8	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.09J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	3.7J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected:

04/23/2009 12:02

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

Field Determinations

:Hq

7.85

pH Units

uMHO

Chlorine, residual:

Conductivity:

163 14.73

Temperature: **Dissolved Oxygen: 10.38**

mg/L

Other:

Flow:

CFS

TEST: Mercury METHOD: EPA 245.1						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.044J	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313008

Project Name:

Sample Description:

Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.: TN0005452 Outfall 002

Date/Time Collected:

04/23/2009 12:09

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC **TDEC-WPC**

Priority Date:

Date/Time Received:

04/23/2009 14:40

Received By:

E McCrary

Field Determinations

pH: 7.61

Chlorine, residual:

pH Units

Conductivity: Temperature: 54 15.50 **uMHO**

Dissolved Oxygen: 10.37

mg/L

Other: Flow:

TEST: Digestion Metals	etals METHOD: EPA 200.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	04/27/2009				A Wilson	4/27/2009	

TEST: ICP	ME	THOD: EPA 20	0.7	"		
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	510	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	ME	THOD: EPA 20	0.8			• .
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	660	μg/L	6.4	10	M Pattanayek	4/29/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	4/28/2009
Arsenic	2.8J	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	40	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	0.14J	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.61J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	3.4	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	1.0	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	38	μg/L	0.42	1	M Pattanayek	4/28/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.13J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	7.8	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313008

Project Name:

Sample Description:

Clinch River TVA Discharge Point

12:09

Sampler Project Name: TVA Ash Spill

Project Site No.:

5A

Station No.: TN0005452 Outfall 002

Date/Time Collected: Sampler's Name:

04/23/2009 Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO: **Sampling Agency:** Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

TEST: Mercury

E McCrary

MF	ETH	OD:	EΡΔ	245	1

Field Determinations

Dissolved Oxygen: 10.37

Chlorine, residual:

Conductivity:

Temperature:

7.61

54

15.50

pH Units

uMHO

mg/L

CFS

:Hq

Other:

Flow:

ANALYTE	RESULT	UNITS	MDL	WQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Wilson	4/29/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002313009

Project Name:

Field Determinations

Dissolved Oxygen: 10.61

Conductivity:

Temperature:

8.08

222

14.94

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

Sample Description: Sampler Project Name: TVA Ash Spill

Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual:

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected:

04/23/2009 12:21

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced:

TDEC-WPC

Priority Date:

Date/Time Received:

04/23/2009

14:40

Received By:

E McCrary

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/27/2009				A Wilson	4/27/2009

TEST: ICP	MET	THOD: EPA 200	0.7			
ANALYTE	 RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	200	μg/L	2.9	10	A Bass	4/29/2009

TEST: ICP-MS	METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	180	μg/L	6.4	10	M Pattanayek	4/28/2009
Antimony	U	μg/L	0.33	· 1	M Pattanayek	4/28/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	4/28/2009
Barium	32	μg/L	2.5	5	M Pattanayek	4/28/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	4/28/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	4/28/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	4/28/2009
Cobalt	0.25J	μg/L	0.04	1	M Pattanayek	4/28/2009
Copper	U	μg/L	0.38	1	M Pattanayek	4/28/2009
Lead	0.31J	μg/L	0.10	1	M Pattanayek	4/28/2009
Manganese	36	μg/L.	0.42	1	M Pattanayek	4/28/2009
Nickel	1.8	μg/L	0.25	1	M Pattanayek	4/28/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	4/28/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	4/28/2009
Thallium	0.06J	μg/L	0.03	1	M Pattanayek	4/28/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	4/28/2009
Zinc	2.6J	μg/L	1.9	5	M Pattanayek	4/28/2009

K00002313009

Project Name:

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TEST: Mercury

METHOD: EPA 245.1

MDL UNITS **ANALYTE** RESULT 0.062J 0.029 Mercury μg/L

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Field Determinations

pH:

8.08

pH Units

uMHO

Conductivity:

MQL

0.2

Temperature:

222

ANALYZED BY:

A Wilson

14.94

Dissolved Oxygen: 10.61

mg/L

DATE

4/29/2009

Other:

Flow: